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Status of J-PARC accelerator chain

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The Japan Proton Accelerator Research Complex supplies a high-intensity proton beams for the physics experimental programs in the Material and Life Science Facility (MLF), the Hadron experimental facility and the neutrino target. In such a high-intensity hadron accelerator, losing less than 0.1% of the beam can cause several problems. Such lost protons can cause serious radioactivation and accelerator component malfunctions. Therefore, we have been continuing a beam study to achieve high-power operation with enough smaller loss condition. In addition, we have also improved and maintained the accelerator components, enabling a stable operation. Through these efforts, we established a beam power of 1-MW operation for the MLF users and a beam power of 800-kW operation for the neutrino users. In this paper, Recent achievement is summarized.

Footnotes

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